

STAT

SUPPLEMENT TO
REPORT NO.

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USSR IRRIGATION PROJECTS OF THE FIFTH FIVE-YEAR PLAN

[Numbers in parentheses refer to appended sources.]

To increase the area of irrigated lands by 30-35 percent during the Five-Year Plan, to build 30,000-35,000 ponds and reservoirs in sovkhozes and kolkhozes, and to insure their utilization.

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To reclaim swamps in the Belorussian SSR (in the Poles'ye lowlands first), Ukrainian SSR, Lithuanian SSR, Estonian SSR, Karelo-Finnish SSR, northwestern and central region of the RSFSR, in the Barabinskaya Lowland, and other areas. To increase the area of reclaimed land by 40-45 percent between 1951 and 1955.

It is planned to utilize artesian water on a large scale for spot irrigation in some regions of Central Asia and Kazakhstan.(1)

MIDDLE VOLGA REGION

Construction of large reservoirs with a total capacity of over 6 billion cubic meters is planned for irrigating one million hectares in the Middle Volga Region. Electric power generated by the Kuybyshevskaya GES will be used. The irrigation systems will include 12,000 kilometers of canals and 900 pumping stations, involving over 500 million cubic meters of earthwork, and about 2 million cubic meters of concrete and reinforced concrete.(1) About 160,000 tons of various metals will be used for structures.(2)

The Main Office of Sredvolgovoedstroy (Administration for Construction of Irrigation Systems in the Middle Volga Region), Ministry of Agriculture USSR, is constructing seven irrigation systems in Kuybyshevskaya and Chkalovskaya oblasts.(1) These are the Vetlyanskaya, Chernovskaya, Pikelyanskaya, Talovskaya, Teplovskaya, Polovskaya, and Krutinkovskaya systems.(3) Preliminary work has already been completed; 85 residential houses for builders have been finished and put in use. Machine repair plants, garages, restaurants, and other auxiliary enterprises were under construction in November 1952.(1)

After completion of the Kuybyshevskaya GES, 1,500 kilowatts of electric power will be available for each hectare of land irrigated.(3)

Some of the irrigation canals will be 300 kilometers long and will need 120 cubic meters of water per second. The larger canals will be navigable and have locks. Not only the Volga River, but its numerous tributaries will be utilized for irrigation. About 2,000 dams, some of which will reach 31 meters in height and 5 kilometers in length, will be built on these rivers.(4)

Sredvolgovoedstroy is equipped with over 100 different types of construction machinery. Total mechanization of work made it possible to complete the dam across the Chernoyka River at the head of Chernovskaya System during summer 1952. It took 250,000 cubic meters of earth to form the dam, which is 1,150 meters long and 15 meters high. The Chernikovskiy Reservoir formed by the dam was to be filled with water during the 1953 spring floods.(5)

The Vetlyanskaya Irrigation System will have a dam across the Vetlyanka River, a tributary of the Samara River. The dam will be 2 kilometers long and will form a reservoir to hold 26.5 million cubic meters of water. Irrigation canals 100 kilometers long will irrigate 5,600 hectares in Utevskiy and Bogatovskiy rayons of Kuybyshevskaya Oblast.(4)

The work on the Krutinkovskaya System in Derzhavinskiy Rayon of Chkalovskaya Oblast was started by the Buzuluk Construction and Installation Office of Sredvolgovoedstroy in May 1952. The system will have a reservoir holding over 4 million cubic meters of water and is to irrigate the first 1,600 hectares of land in 1953.(6) When completed, the trunk canals of the system will be 30 kilometers long, and distributing canals will be 26 kilometers long.(7)

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VOLGA-DON CANAL REGION

The second stage of work on irrigation systems based on the Volga-Don Canal in Rostovskaya Oblast, which is under way, includes 115 million cubic meters of earthwork and the placing of 220,000 cubic meters of concrete and reinforced concrete.

Work on the systems in Stalingradskaya Oblast is also under way. When completed, 27 systems will receive water from the Tsiniyanskaya Reservoir and six others from other parts of the Volga-Don Canal imeni V. I. Lenin.

During the period 1952 - 1955, 44 million cubic meters of earthwork are to be carried out, 224,000 cubic meters of concrete placed (1), and 31,000 tons of metallic structures built.(8)

The largest of the systems is Yergeninskaya, the main canal of which is 156 kilometers long.(8) Its source is the Varvarovskoye Reservoir of the Volga-Don Canal.(9) Other systems include the Yuzhno-Chirskaya, Aksay-Kurmoyarskaya, Generalovskaya, Varvarovskaya, Gorodishchenskaya (8), and Severnaya.(10)

The 54-kilometer-long Generalovskiy Trunk Canal, part of the irrigation system of the same name, which is to irrigate 12,000 hectares (11), was completed in November 1952.(10) The Generalovskaya System also includes one pumping station located at the Tsiniyanskaya Reservoir which will pump water from the reservoir into the canal, at a rate of 20,000 cubic meters per hour, and another located at the 48th kilometer of the canal to lift the water further. The system is scheduled to be completed in 1953 simultaneously with the Novo-Aksayskaya System.(12)

IRRIGATION SYSTEMS BASED ON STALINGRADSKOYE RESERVOIRVolga-Ural Canal

The Volga-Ural Canal will be twice as wide as the Volga-Don Canal, and the earthwork involved will be eight times greater. A navigable lock and a pumping station, capable of pumping 400 cubic meters of water per second, will be built at the Volga end of the canal and a GES at its Ural end. Forty-five other reinforced-concrete structures, including water inlets and outlets, emergency gates, and pumping stations, will be built along the canal. The work also includes paving with stones 500,000 square meters of the sloped canal sides. An asphalt-surfaced highway will run along the entire length of the canal. About 360 kilometers of high-voltage power lines, 200 kilometers of railways, living space for builders, and auxiliary enterprises are to be built. To carry out 415 million cubic meters of earthwork within the remaining 4 years, 17 model ESh-14/65 excavators, 600 scrapers of 10 and 15 cubic meters capacity, and hundreds of other machines will be used.(13)

The Kazakh Branch of the All-Union Academy of Agricultural Sciences imeni Lenin has completed the project for utilizing waters of small rivers in the region of the future Volga-Ural Canal. It is planned to form large reservoirs by building dams on the Bol'shoy Uzen' and Malyy Uzen' at the points where the canal will cross these rivers. It is estimated that spring waters caught in these reservoirs alone will be sufficient to irrigate 200,000 hectares once a year by flooding.(14)

The first cubic meter of earth on the Volga-Ural Canal was excavated on 21 April 1952.(15) The work started in earnest on 22 May 1952 (16) with two excavators.(17) On 18 September 1952, five excavators of the Uralets type were on the job.(18)

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In July 1952, an electric power substation was under construction within the first construction sector of the Volga-Ural Canal, in Osadnaya Balka; a power transmission line leading to it from the existing substation, on Lesnoy island in the Volga River, was being installed.(19)

Ural-Kushum Canal

The 30-kilometer Ural-Kushum Canal, built in 1939 to supply water to the Kushum River valley from the Ural River during spring floods, is to be enlarged. Water supply canals are to be built in the area between the Ural and Kushum rivers, branching out from both sides of the Ural-Kushum Canal for 160-180 kilometers. According to preliminary plans, the network of canals will supply water to one million hectares and will irrigate 100,000 hectares in Chapayevskiy, Furmanovskiy, Dzhangalinskiy, and Zekenovskiy rayons of Zapadno-Kazakhstanskaya Oblast; these represent the territory north of the Volga-Ural Canal.

It is planned to complete the first stage of construction in 1954, and the second stage in 1955.(20)

SOUTH UKRAINIAN AND NORTH CRIMEAN CANALS

The head structure of the South Ukrainian Canal will be located near Mokroye Railway Station.(21)

The 110-kilometer stretch of the canal between Zaporozh'ye and Molochanskoye Reservoir will be 80 meters wide. The Molochanskaya Dam, which will be 9 kilometers long, 40 meters high, and 300-400 meters wide, will form a 65-kilometer-long reservoir, holding 6 billion cubic meters of water. A GES of 10,000-kilowatt capacity will be built here.(22) The dam and reservoir will be located near Melitopol'.(23)

The work on the canals planned for 1952 was completed on 1 December 1952. About 9 million cubic meters of earth were excavated and shifted during the 11 months, which is five times more than the amount excavated in 1951.(24) In 1952, it was planned to excavate 4 million cubic meters of earth, to place thousands of cubic meters of concrete and brickwork, and to build 685 structures.(25)

Verkhne- and Nizhne-Inguletskaya Systems

Construction of the Verkhne-Inguletskaya and Nizhne-Inguletskaya irrigation systems, which have a network of canals 5,270 kilometers long, requires 90 million cubic meters of earthwork and 150,000 cubic meters of concrete. The two systems are a part of the South Ukrainian and North Crimean Canal project.(26)

The engineering project of the Verkhne-Inguletskaya Irrigation System was approved in June 1952 by the State Committee for Construction Affairs under the Council of Ministers USSR, and work actually started in the field on 10 July 1952.(27)

On 22 September 1952, Construction and Installation Administration No 14 of Ukrvodstroy (Main Administration for Construction of South Ukrainian and North Crimean Canals) in Snegirevka, which is in charge of the construction, reported that 811,000 cubic meters -- the amount of earthwork planned for all of 1952 -- had already been completed and that an extra 200,000 cubic meters were to be excavated before the end of 1952.(28)

As of 30 December 1952, 33 kilometers of the main trunk canal of the system had been dug.(29)

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As of 13 April 1953, excavators were working on the 50th kilometer of the canal, and about 2 million cubic meters of earth had been excavated from the bed of the canal.(30)

The Nizhne-Inguletskaya System will irrigate lands of the kolkhozes and sovkhoses located on the right bank of the Dnepr River in Khersonskaya Oblast. Its trunk canal will start at Dar'yevka village in Khersonskiy Rayon and extend for 60 or 70 kilometers. Distributing canals branching south from it will irrigate 80,000 hectares. A pumping station at Dar'yevka and another at Snegirevka will lift water into the canal.(31)

The Dar'yevskoye Construction and Installation Administration of Ukrvodstroy started work on the system in spring 1953.(32)

About 35,000 cubic meters of earth were excavated and shifted from the bed of the trunk canal in April 1953, and work on the canal was in progress between Dar'yevka and Zagoryanovka villages.(33)

Kamenskaya, Ivanovskaya, and Blagoveshchenskaya Irrigation Systems

The Kamenskaya, Ivanovskaya, and Blagoveshchenskaya systems, which are also a part of the South Ukrainian and North Crimean Canal project, will irrigate altogether 23,000 hectares of fertile land called "Kamenskiy pod" in Kamensko-Dneprovskiy Rayon of Zaporozhskaya Oblast.(34) Kamenskiy Pod is a valley 40 kilometers long and 7 kilometers wide which is a former bed of the Dnepr River, and extends east of the Dnepr.(35) The Kamenskaya Irrigation System is the first stage of the South Crimean and North Crimean Canal project requiring the excavation and shifting of 400,000 cubic meters of earth.(34)

It was put in operation on 22 April 1952 when powerful pumps started pumping water into the system's trunk canal, which extends from Belozerskiy Liman (Firth) of the Dnepr. The system consisted of 250 kilometers of canals and irrigated an area of 2,100 hectares. The area was to be increased to 3,000 hectares by the end of 1952.(36) There are five pumps installed in the system's pumping station. Earthwork amounted to 200,000 cubic meters, and 288 hydraulic structures and an electric power transmission line were built.(25)

The second section of the project, the Ivanovskaya System, which is to irrigate 14,000 hectares, was to have been completed in spring 1953 (35), but completion has been postponed until fall 1953.(33) When completed, the Ivanovskaya system will have 814 kilometers of canals whose construction will involve excavating and shifting 4 million cubic meters of earth. The main canal of the system will be fed with water from the Konk River, a left tributary of the Dnepr.(37) About 15 kilometers of the main canal were completed in July 1952.(38)

Plans also call for completing the third section of the project -- the Blagoveshchenskaya System -- in 1953.(36)

North Crimean Canal

Construction of the North Crimean Canal has been entrusted to the Ministry of Cotton Growing USSR [now part of the Ministry of Agriculture]. Surveying and planning is done by the ministry's planning institute, "Gidrovodkhopoz." (39) In March 1952, an expedition sent by the institute completed surveying the canal for its entire length from Perekop to the Kerch Peninsula, including the branch canal to Razdol'noye.(40)

General plans and specifications for the project were completed by the institute on 1 October 1952, with E. L. Lazaryan as chief engineer of the project.(39)

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The North Crimean Canal begins at the 325th kilometer of the South Ukrainian Canal and is an extension of the latter on the Crimean Peninsula. It will supply water to 700,000 hectares and irrigate 300,000 hectares.

The Razdol'nenskaya Branch of the canal, which is 75 kilometers long, goes into the Tarkhankutskiy Peninsula, after branching off the main canal on its 387th kilometer near Novo-Krymskoye village.(41) It will supply water by gravity to the Chatarlykskoye Reservoir on the peninsula, and to the smaller distribution canals.(39)

The main canal will continue from Novo-Krymskoye village to Dzhankoy, cross the Moscow-Simferopol' Railroad, and extend along the Dzhankoy-Kerch Railroad to Frontovoye village, where the canal will end at its 527th kilometer. A pumping station built here will lift the water into a reservoir with a capacity of 56 million cubic meters. From the reservoir, water will be supplied to the city of Feodosiya, as well as to irrigate 500 hectares near the city through a pipeline 20 kilometers long. Another pumping station will further lift the water from the reservoir into a canal 45 kilometers long going toward Kerch. The canal will feed Stantsionnoye Reservoir near Zelenyy Yar village. The latter reservoir will supply water to Kerch.(41)

Salgirskaia Irrigation System

As of August 1952, work on the Simferopol' Reservoir and the Salgirskaia Irrigation System was in progress on the right bank of the Salgir River.(42) Constructing the dam of the reservoir started on 24 March 1953.(43)

BELORUSSIA AND UKRAINE

The work of draining the extensive Poles'ye swamps in Belorussia and the Ukraine and reclaiming the land for agriculture will involve carrying out 900 million cubic meters of earthwork and placing 690,000 cubic meters of concrete.(1)

Turunchuk Island is located in the lower stretch of the Dnestr River. A dyke 50 kilometers long was being constructed around the island in May 1952 to protect it against spring floods. Several pumping stations and irrigation canals to be built will turn the fertile land of the island into a vegetable garden which will supply its produce to the vegetable canning plants of the Dnestr River region.(44)

The Oster River, in southern Chernigovskaya Oblast, overflows in the spring and swamps tens of thousands of hectares of arable land along its course. Its for draining the flood waters and for irrigation during droughts, as well as dams and locks, were under construction in summer 1952 along the river's length of 200 kilometers. The project also includes construction of 250 kilometers of new roads and scores of bridges.(45)

CAUCASUS

Within a few kilometers of Krasnodar, a 25-kilometer-long dam which forms the enormous Shapsugskoye Reservoir has been completed. The water from the reservoir will irrigate 7,500 hectares of rice fields and will help keep the Kuban' River navigable during the low water period. The cost of the construction reached tens of millions of rubles.(46)

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Kuban'-Yegorlykaskaya System

Stavropol'stroy Trust, which is in charge of constructing the Kuban'-Yegorlykaskaya irrigation and water supply system, constructed during 1952 a large dam on the Kuban' River forming the Novo-Troytskiy Reservoir, and the head structure, and the Nevinnomysskiy Trunk Canal. The reservoir was already filled with water in November 1952.(1) The 82-kilometer Pravo-Yegorlykskiy Canal was also completed and filled with water.

During the Fifth Five-Year Plan, the system will be further enlarged and when completed will irrigate over 100,000 hectares and supply water to 2 million hectares.

The irrigation system will, when put in operation, increase cash income of the kolkhozes concerned by 348 million rubles. A small GES is under construction within the system to supply cheap electric power to kolkhozes.(47)

Terek-Kuna System

A system planned for irrigation of the Nogayskaya Steppe and black soil regions in Groznenskaya Oblast, in Stavropol'skiy Krai, and in Severo-Osetinskaya ASSR will supply water to 2.2 million hectares and irrigate 200,000 hectares. Terkhumvodstroy is in charge of the constructions.

The Tersko-Kumskiy [between the Terek and Kuma rivers] Trunk Canal of the system, which is already under construction, will be 152 kilometers long, and will have 45 structures and 4 hydroelectric power stations along its length. Total length of distribution canals of the system will reach 2,800 kilometers. The work will involve 84 million cubic meters of earthwork and 283,000 cubic meters of concrete and reinforced concrete.(1) Builders of the canal, which already extends across Northern Osetia, recently crossed the border of Northern Osetia. On 2 April 1953, the work was in progress in Kurskiy Rayon of Stavropol'skiy Krai. Altogether 22 kilometers of the canal have been completed.(48)

Plans and specifications for the project are being prepared by the Pyatigorsk Branch of Yuzhgiprovdokhoz (Southern State Planning Institute for Water Resources). V. M. Dombrovskiy is the chief engineer of the project.(49)

Samgori System

The three hydroelectric power stations to be built on the upper main canal of the Samgori System will be located at Satskhenski, Martkobi, and Tetrichevi villages. Furthermore, Sionskoye Reservoir and Sionskaya GES will be built near Sioni. The Sionskoye Reservoir is being built for the purpose of maintaining the required water level at the source of the upper canal at Paldo, in Tbilisskoye Reservoir and in the Iori River.(50) The work on the reservoir was in full swing in November 1952 when an electric power transmission line was extended to the construction site.(51)

The lower main canal of the system will connect the Tbilisskoye Reservoir with Dzhandari (Karayya) Lake.(50)

A project for exploiting the waters of the Alazan River for operating a series of hydroelectric power stations to be built there, and for irrigation of 200,000 hectares of arid land in eastern Georgia was being developed in 1952.(52)

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Mukhranskaya System

The Mukhranskaya Irrigation System, now under construction, provides for irrigation using waters of the Aragvi River. The river originates in the snow-covered peaks of the main Caucasian Range and, after receiving waters from its numerous tributaries, discharges into the Kura River. The project includes building rural hydroelectric power stations on the river and building a dam across the Aragvi at Bulachauri. The dam will raise the water level, thus diverting the water by gravity into the canal which has already been dug. Branch canals are under construction to irrigate lands in Mukhranskaya, Tserovanskaya, and Tsulkanskaya valleys. Completion of the project will require 16,000 cubic meters of concrete work.(53)

CENTRAL ASIA

A project for enlarging the existing Sovet-Yab Irrigation Canal which will make the irrigation of an additional 6,000 hectares possible has been approved by the chief engineer of the Institute for Planning Irrigation Systems under the [former] Ministry of Cotton Growing USSR. (54)

An irrigation system to irrigate 90,000 hectares of virgin land will be built in Kara-Kalpakia before the Takhia-Tash Dam is built. The work will consist of reconstruction of the Trunk Canal imeni Lenin, the "Kzyl Ketken" Trunk Canal, and their branches.(55) The work was in progress day and night in June 1952, when hundreds of excavators, bulldozers, and other machines were working on the job. On 10 July 1952 the digging of a new 22-kilometer trunk canal had started. It will irrigate lands in Kuybyshevskiy Rayon earmarked for cotton growing.(56)

Near Kzyl-Orda, on the bank of the Syr-Dar'ya River, there is a sandy area of land called Sabalak in which a settlement of builders -- Tas Buget -- was built. It has city-type houses, electricity, a water-supply system, and parks. The settlement is connected with the oblast center (Kzyl-Orda) by a railroad and a highway.

Within one kilometer of Tas-Buget is a bend of the Syr-Dar'ya River where the Kzyl-Ordinskaya Dam is under construction. When completed, the dam will form a reservoir which will supply water to the arid steppes.(57) The reservoir will irrigate 700,000 hectares, mostly in the Kyzyl-Kum Desert. The construction organization is equipped with modern Soviet-manufactured machinery of high efficiency. Labor is supplied by the neighboring kolkhozes.(58)

Bol'shoy Chuyskiy Canal

I. I. Vovchenko is the chief of the construction of the Bol'shoy Chuyskiy Canal on the Chu River. Just above the Chumyshskaya Dam on the Chu River, a hydraulic center has been completed.(59), where the western section of the canal originates.(60) Concreting has started on the Issyk-Atinskiy hydraulic center. With the completion of plans and specifications for the eastern section of the canal, work on it was to have begun in March 1953.(59)

SIBERIA

It is planned to reclaim and irrigate Barabinskaya Lowland, which includes 17 rayons of Novosibirskaya Oblast.

Surveying is about to start on the project to irrigate 2,340,000 hectares of arid lands of the Kulundinskaya Steppe between the Ob' and Irtysh rivers.(1)

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